

Remarks:

Reconsideration of the application, as amended herein, is respectfully requested.

Claims 1 - 17 are presently pending in the application. Claim 10 has been amended. As it is believed that the claims were patentable over the cited art in their original form, the claims have not been amended to overcome the references.

In item 3 of the above-identified Office Action, claim 10 was objected to for having a duplicate period at the end of the claim. Claim 10 has been amended to address the above issue.

In item 6 of the Office Action, claims 1 - 7, 10 - 15 and 17 were rejected under 35 U.S.C. § 103(a) as allegedly being obvious over European Patent Application Publication No. EP 0 455 946 A2 to Harrison ("HARRISON"). In item 27 of the Office Action, claims 8, 9 and 16 were rejected under 35 U.S.C. § 103(a) as allegedly being obvious over HARRISON in view of U. S. Patent No. 5,956,514 to Wen ("WEN").

Applicant respectfully traverses the above rejections, as applied to the amended claims.

More particularly, Applicant's 1 recites, among other limitations:

at least one program operation unit for running a program;

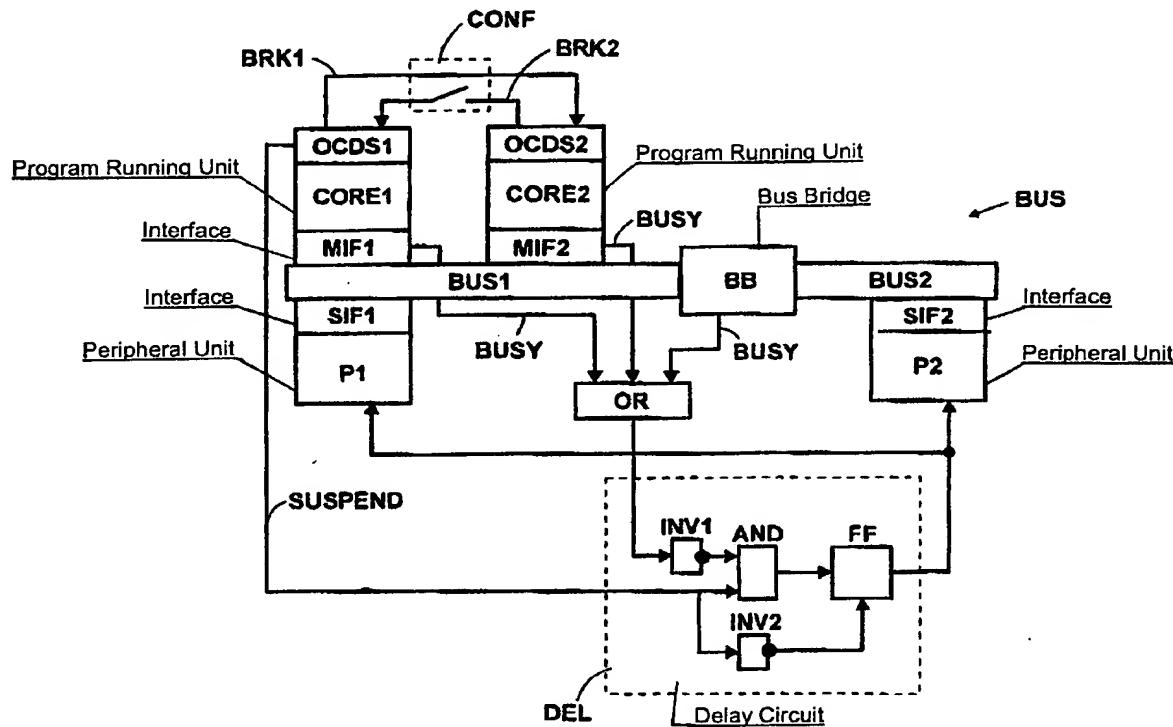
other components connected to said stopping device, said stopping device issuing a stop command causing said other components to be stopped, in addition to stopping said program operation unit with which said stopping device is associated; and

said other components including at least one further program operation unit or at least one peripheral, said stopping command being selectively provided from said stopping device to said other component if said other component is said further program operation unit and said stop command being directly provided from said stopping device to said other component if said other component is a peripheral. [emphasis added by Applicant]

Applicant's claim 1 requires, among other things, that a stopping device issue a stop command to another component, and that the stop command is selectively provided from the stopping device to the other component if the other component is a further program operation unit. This feature of Applicant's claim 1 is supported in the instant application, by paragraph [0039], which states:

On their way to the OCDS modules for which they are intended, the signals BRK1 and BRK2 pass through the stopping configuration apparatus CONF. The stopping configuration apparatus CONF contains switching elements via which it is possible to select whether the signal BRK1 is passed on to the second OCDS module OCDS2, and/or whether the signal BRK2 is passed on to the first OCDS module OCDS1. [emphasis added by Applicant]

The sole figure of the instant application, showing the stopping configuration apparatus CONF, is reproduced herebelow for convenience.



As can be seen from Applicant's figure, a stopping command will be issued in the system, but based on the states of the switching elements in the stopping configuration CONF, that stopping command is either provided, or not provided (i.e., selectively provided) to the other program operation unit. This, likewise, supports Applicant's claim 1, which recites, among other limitations, said stopping device issuing a stop command causing said other components to be stopped, and said

stopping command being selectively provided from said stopping device to said other component if said other component is said further program operation unit.

Contrary to Applicant's invention of claim 1, **HARRISON** neither teaches, nor suggests, a stopping command, once generated by the stopping device, being selectively provided from the stopping device to another component if the other component is a further program operation unit. More particularly, the **HARRISON** reference discloses a multiprocessor computer including a plurality of parallel processors p0 - p7 (see Fig. 1 of **HARRISON**). The parallel processors of **HARRISON** are used for running programs, as stated in col. 4 of **HARRISON**, lines 22 - 27, which states:

The application running in processors 16 through 23 will be halted during breakpoints which are detected by the bus monitor, and a symbolic debugging may be carried out by invoking the debugging program running in processor 16 on each of these executing processors 16 through 23. [emphasis added by Applicant]

As can be seen, in the **HARRISON** reference, the processors p1 - p7 (i.e., processors 17 - 23 of Fig. 1 of **HARRISON**), would be analogous to a "further program operation unit" component of Applicant's claims. That the processors p1-p7 of **HARRISON** operate at least as further program operation units is conceded on page 4 of the Office Action (i.e., "Therefore, any of the processors, P1-P7 could be considered either a

peripheral or a program operation unit"). However, Applicant respectfully disagrees with the statement made in the Office Action that the processors p1 - p7 of **HARRISON** could be peripherals or a program operation unit. Rather, Applicant believes that, as defined by the specification of the instant application and that of **HARRISON**, the processors p1 - p7 can only be considered to be further program operation units, when applied to Applicant's claims. Applicant defines program operation units as being **for running programs**. Applicant defined peripherals as, units being used in programmable units, in addition to one or more program running units, to cooperate with them. More particularly, Applicant's specification, in paragraph [0029], clearly defines **peripheral units** as:

The peripheral units P1 and P2 are, for example, A/D converters, timers, DMA controllers or other units, which can be used in programmable units in addition to one or more program running units, and cooperate with them.

As such, as defined by Applicant's specification, and as clearly used in the claims, program running units, units running a program, are precluded from being peripherals.

The processors, p1 - p7 of **HARRISON**, are program running units that are running a program (see, col. 4 of **HARRISON**, lines 22 - 27), and, as such, **as defined by the specification of the**

instant application, are acting as further program operation units for purposes of Applicant's claims.

Applicant's application clearly defines, both in the specification and in the claims, peripheral units and program operation/running units as two different things. Peripherals, by their very definition in the instant specification, cooperate with one or more program running units, but are not program running units. The processors p1 - p7 of the HARRISON reference are clearly program operation units, as defined in the instant application, and not peripheral units.

As such, in order to teach or suggest the limitations of Applicant's claim 1, HARRISON must disclose that the bus monitor 12 of HARRISON (analogized in the Office Action to Applicant's "stopping device") issues a stop command and then selectively provides the stopping command to at least one of the further program operation units (i.e., processors p1 - p7). However, the HARRISON reference fails to teach or suggest, among other limitations of Applicant's claims, that a stopping device actually issues a stopping command to another component, and then only selectively provides the stopping command to the other component, which is a program operation unit.

Rather, in **HARRISON**, every time a stopping command is issued for an intended processors p1 - p7, the intended processor p1 - p7 is stopped. See, for example, col. 7 of **HARRISON**, lines 19 - 26 (all processors stopped if any processor tries to write to a shared memory location for variable X); col. 7 of **HARRISON**, line 57 (all processors stopped if trace memory is full); and col. 7 of **HARRISON**, lines 40 - 42 (a specified processor is stopped if the specified processor tries to write to a shared memory location for variable X). In all of the above examples, the processors p1 - p7 are all operating as program operation units and all are stopped by the bus monitor 12 of HARRISON. **HARRISON** does not teach or suggest that, when a stopping command is issued by the stopping device, it may be selectively provided to a program operation unit, as required by Applicant's claim 1.

In the Office Action, it is alleged on page 3, paragraph d, that Applicant's invention of claim 1, including the stopping command being selectively provided, is disclosed in **HARRISON** in col. 3, line 42 - col. 4, line 24, col. 8, line 55 - col. 9, line 16 and figure 4. However, Applicant respectfully disagrees. Applicant has reviewed the cited portions of **HARRISON** and has not found such a teaching. It is believed that, perhaps, the Office Action was attempting to point to col. 9 of **HARRISON**, lines 5 - 10 (shown graphically in Fig. 4)

as allegedly teaching selectively stopping a processor. Col. 9 of **HARRISON**, lines 5 - 10, states:

When a match is found between a detected event and the event defined in the event comparator 30, the event may either be logged into the trace memory in step 61 or an interrupt may be produced, depending on the quality and nature of the detected event. [emphasis added by Applicant]

Although the cited portion of **HARRISON** describes selectively producing an interrupt, it neither teaches or suggests affirmatively producing an interrupt and selectively providing the produced interrupt to a further program operation unit, as required by Applicant's claim 1.

As such, **HARRISON** fails to teach or suggest Applicant's invention of claim 1.

Applicant's claim 11 recites, a programmable unit, comprising:

at least one program operation unit for running a program;

a stopping device connected to said program operation unit, said stopping device stopping the running of the program by said program operation unit; and

peripherals connected to said stopping device, said stopping device issuing a stop command directly to said peripherals causing said peripherals to be stopped, in addition to stopping said program operation unit with which said stopping device is associated. [emphasis added by Applicant]

As stated above, in connection with the patentability of claim 1, the **HARRISON** reference neither teaches nor suggests, among other limitations of Applicant's claims, **peripherals connected to said stopping device**. Contrary to the allegations made on page 4 of the Office Action, the instant application defines a program running unit as a unit for running a program, and a peripheral unit as, for example, A/D converters, timers, DMA controllers or other units, which can be used in programmable units in addition to one or more program running units, **and cooperate with them**. It is clear from Applicant's specification that devices are either peripheral units or program operation units, but not both. **HARRISON** teaches that the parallel processors of **HARRISON** are used for running programs, as stated in col. 4 of **HARRISON**, lines 22 - 27, which states:

The application running in processors 16 through 23 will be halted during breakpoints which are detected by the bus monitor, and a symbolic debugging may be carried out by invoking the debugging program running in processor 16 on each of these executing processors 16 through 23. [emphasis added by Applicant]

As can be seen, in the **HARRISON** reference, the processors p1 - p7 (i.e., processors 17 - 23 of Fig. 1 of **HARRISON**), would be analogous to a "further program operation unit" component of Applicant's claims. As such, **HARRISON** neither teaches, nor suggests, among other limitations, Applicant's particularly claimed **peripherals connected to a stopping device**.

The **WEN** reference cited in the Office Action in combination with **HARRISON** against certain of Applicant's dependent claims, does nothing to cure the above-discussed deficiencies of the **HARRISON** reference.

It is accordingly believed that none of the references, whether taken alone or in any combination, teach or suggest the features of claims 1 and 11. Claims 1 and 11 are, therefore, believed to be patentable over the art. The dependent claims are believed to be patentable as well because they all are ultimately dependent on claims 1 or 11.

In view of the foregoing, reconsideration and allowance of claims 1 - 17 are solicited.

In the event the Examiner should still find any of the claims to be unpatentable, counsel would appreciate receiving a telephone call so that, if possible, patentable language can be worked out.

If an extension of time for this paper is required, petition for extension is herewith made.

Applic. No. 09/974,924
Response Dated November 14, 2005
Responsive to Office Action of August 11, 2005

Please charge any fees that might be due with respect to
Sections 1.16 and 1.17 to the Deposit Account of Lerner and
Greenberg, P.A., No. 12-1099.

Respectfully submitted,



For Applicant

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